

In the claims:

- 1 14. An isolated Plasminute polynucleotide, wherein said polynucleotide encodes the
2 polypeptide consisting of amino acids 1 to 207 of SEQ ID NO:54 or a polypeptide
3 fragment thereof.
- 1 15. The polynucleotide of claim 14, wherein said polypeptide fragment comprises amino
2 acids 1 to 207 of SEQ ID NO:54.
- 1 16. The polynucleotide of claim 14, wherein said polypeptide or polypeptide fragment
2 thereof has biological activity.
- 1 17. The polynucleotide of claim 16, wherein said biological activity is serine protease
2 activity.
- 1 18. The polynucleotide of claim 16, wherein said biological activity is inhibition of serine
2 protease activity.
- 1 19. The polynucleotide of claim 14, wherein said polynucleotide consists of nucleotides 1044
2 to 1667 of SEQ ID NO:53, or is a fragment thereof.
- 1 20. A polynucleotide, wherein said polynucleotide consists of nucleotides 1 to 1036 of SEQ
2 ID NO:53, or is a fragment thereof.
- 1 21. A polynucleotide, wherein said polynucleotide consists of nucleotides 1037 to 1865 of
2 SEQ ID NO:53, or is a fragment thereof.

- 1 22. The complement of the polynucleotide of claim 14, wherein said polynucleotide consists
2 of nucleotides 1044 to 1667 of SEQ ID NO:53, or a fragment thereof.
- 1 23. The complement of the polynucleotide of claim 20, wherein said polynucleotide consists
2 of nucleotides 1 to 1036 of SEQ ID NO:53, or a fragment thereof. .
- 1 24. The complement of the polynucleotide of claim 21, wherein said polynucleotide consists
2 of nucleotides 1037 to 1865 of SEQ ID NO:53, or a fragment thereof.
- 1 25. An expression vector comprising the polynucleotide of claim 14, operably linked to a
2 promoter.
- 1 26. A composition comprising the polynucleotide of claim 14 and a physiologically
2 acceptable carrier.
- 1 27. A host cell recombinant for the polynucleotide of claim 14.
- 1 28. A non-human transgenic animal recombinant for the polynucleotide of claim 14.
- 1 29. An isolated polynucleotide comprising an open reading frame of the human cDNA of
2 deposited clone 789749_182-14-3-0-C12-F.
- 1 30. A Plasminute polypeptide encoded by the polynucleotide of claim 29.

- 1 31. A Plasminute polypeptide consisting of amino acids 1 to 207 of SEQ ID NO:54, or a
2 polypeptide fragment thereof.
- 1 32. The polypeptide fragment of claim 31, wherein said polypeptide fragment comprises
2 amino acids 1 to 207 of SEQ ID NO:54.
- 1 33. The polypeptide or polypeptide fragment of claim 31, wherein said polypeptide or
2 polypeptide fragment has biological activity.
- 1 34. The polypeptide or polypeptide fragment of claim 33, wherein said biological activity is
2 serine protease activity.
- 1 35. The polypeptide fragment of claim 33, wherein said biological activity is inhibition of
2 serine protease activity.
- 1 36. A composition comprising the polypeptide of claim 31 and a physiologically acceptable
2 carrier.
- 1 37. A method of making a Plasminute polypeptide, said method comprising:
2 a) providing a population of cells comprising a polynucleotide encoding the Plasminute
3 polypeptide of claim 31, operably linked to a promoter;
4 b) culturing said population of cells under conditions conducive to the production of
5 said polypeptide within said cells; and
6 c) purifying said polypeptide from said population of cells.

- 1 38. The method of claim 37, wherein said polynucleotide consists of nucleotides 1044 to
2 1667, or is a fragment thereof.
- 1 39. An antibody that specifically binds to the polypeptide of claim 31.
- 1 40. The antibody of claim 39, wherein said antibody binds to Plasminute but not to plasmin
2 resulting from proteolytic cleavage of plasminogen at the Arg561-Val562 bond.
- 1 41. The antibody of claim 39, wherein said antibody neutralizes serine protease activity.
- 1 42. The antibody of claim 40, wherein said antibody neutralizes serine protease activity.
- 1 43. A method of binding the polypeptide of claim 31 to the antibody of claim 39, comprising
2 contacting said antibody with said polypeptide under conditions in which said antibody
3 can specifically bind to said polypeptide.
- 1 44. A method of detecting a Plasminute gene product in a biological sample comprising the
2 steps of:
3 a) obtaining said biological sample from a mammal;
4 b) contacting said biological sample with the antibody of claim 39; and
5 c) detecting the presence or absence of binding of said antibody to a protein within
6 said sample;
7 wherein a detection of said binding indicates that Plasminute gene product is expressed in
8 said biological sample.
- 1 45. A method of determining whether Plasminute gene is expressed in a biological sample,
2 comprising the steps of:

- 3 a) obtaining said biological sample from a mammal;
4 b) contacting said biological sample with the polynucleotide of claim 23;
5 c) detecting the presence or absence of hybridization between said polynucleotide
6 and an RNA species within said sample;
7 wherein a detection of said hybridization to said polynucleotide of claim 23 indicates that
8 Plasminute gene is expressed in said biological sample.

1 46. The method of claim 45, wherein said polynucleotide is a primer, and wherein said
2 hybridization is detected by detecting the presence of an amplification product
3 comprising the sequence of said primer.

1 47. A method of identifying a candidate modulator of a Plasminute polypeptide or
2 polypeptide fragment, said method comprising:
3 a) contacting the polypeptide or polypeptide fragment of claim 31 with a test
4 compound; and
5 b) determining whether said compound specifically binds to said polypeptide or
6 polypeptide fragment;
7 wherein a detection that said compound specifically binds to said polypeptide or
8 polypeptide fragment indicates that said compound is a candidate modulator of said
9 Plasminute polypeptide or polypeptide fragment.

1 48. A method for the production of a composition, comprising:
2 a) identifying a candidate modulator of a Plasminute polypeptide or polypeptide
3 fragment using the method of claim 47; and
4 b) combining said modulator with a physiologically acceptable carrier.

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2 49. A method of identifying a candidate modulator of a Plasminute polypeptide or
3 polypeptide fragment, said method comprising:

4 a) contacting the polypeptide or polypeptide fragment of claim 31 with a test
5 compound; and
6 b) determining whether said compound specifically binds to said polypeptide or
7 polypeptide fragment, but not to plasmin resulting from proteolytic cleavage of
8 plasminogen at the Arg561-Val562 bond;
9 wherein a detection that said compound specifically binds to said polypeptide or
10 polypeptide fragment, but not to plasmin resulting from proteolytic cleavage of
11 plasminogen at the Arg561-Val562 bond, indicates that said compound is a candidate
12 modulator of said Plasminute polypeptide or polypeptide fragment.

1 50. A method for the production of a composition, comprising:

- 2 a) identifying a candidate modulator of a Plasminute polypeptide or polypeptide
3 fragment using the method of claim 49; and
4 b) combining said modulator with a physiologically acceptable carrier.

1 51. A method of using the Plasminute polypeptide of claim 34 to assign function to a specific
2 proteolytic fragment of a heterologous protein, said method comprising:

- 3 a) contacting said heterologous protein with said Plasminute polypeptide;
4 b) generating said specific proteolytic fragment of said heterologous protein by said
5 Plasminute serine protease activity; and
6 determining whether said proteolytic fragment of said heterologous protein possesses said
7 function.

1 52. A method of using the Plasminute polypeptide of claim 34 to map an antigenic epitope
2 onto a specific proteolytic fragment of a heterologous protein, said method comprising:

- 3 a) contacting said heterologous protein with said Plasminute polypeptide;
4 b) generating said specific proteolytic fragment of said heterologous protein by said
5 Plasminute serine protease activity; and
6 c) determining whether said proteolytic fragment of said heterologous protein
7 possesses said antigenic epitope.
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